

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-44. (Canceled)

45. (New) A method of expediting startup procedures of a Global Positioning System (GPS) receiver associated with a mobile terminal, the mobile terminal connected to a wireless telecommunications system having a Base Transceiver Station (BTS), the BTS having operational control of the GPS-equipped mobile terminal, the method comprising the steps of:

positioning a number of reference GPS receivers throughout the wireless telecommunications system, each reference GPS receiver capable of providing assistance GPS data, including identity of visible GPS satellites and associated orbital parameters, clock corrections and differential corrections;

sending a request from the GPS-equipped mobile terminal to the BTS for approximate navigational data;

utilizing the BTS location as an initial position estimate for the GPS-equipped mobile terminal and as a criterion for selecting one of the number of reference GPS receivers nearest the GPS-equipped mobile terminal;

retrieving relevant GPS assistance data from the selected reference GPS receiver;

the BTS sending navigational data, comprising the relevant assistance GPS data, to the GPS-equipped mobile terminal for estimating the current position of the GPS-equipped mobile terminal; and

utilizing the navigational data to acquire GPS signals from optimally situated GPS satellites.

46. (New) The method according to claim 45, wherein the step of estimating the current position of the GPS-equipped mobile terminal further comprises
determining a cell ID corresponding to the cell in which the GPS-equipped mobile terminal is currently located.

47. (New) The method according to claim 45 wherein the step including selecting one of a number of reference GPS receivers further comprises
determining the coordinates of the selected reference GPS receiver in a look-up table.

48. (New) The method according to Claim 45, wherein the step of sending a request to the BTS for approximate navigational data is responsive to activation of the mobile terminal.

49. (New) The method according to Claim 45, wherein the step of sending a request to the BTS for approximate navigational data is responsive to placing a call from the GPS-equipped mobile terminal to one of a set of designated numbers.

50. (New) The method according to Claim 49, wherein the one designated number is associated with an emergency service.

51. (New) The method according to Claim 45, wherein the method further comprises, after the step of retrieving the relevant assistance data, the step of storing an estimated location of the one of the reference GPS receivers in said wireless telecommunications system.

52. (New) The method according to Claim 45, wherein the step of estimating the current position of the GPS-equipped mobile terminal further comprises the steps of:
utilizing a timing reference between a GPS clock signal and a frame number,
wherein the timing reference comprises

a correlation between the frame number and the GPS clock signal at the one of the reference GPS receivers and
broadcasting the correlation to the GPS-equipped mobile terminal.

53. (New) A method of expediting startup procedures of a Global Positioning System (GPS) receiver associated with a mobile terminal, the mobile terminal connected to a wireless telecommunications system having a Base Transceiver Station (BTS), the BTS having operational control of the GPS-equipped mobile terminal, the method comprising the steps of:

positioning a number of reference GPS receivers throughout the wireless telecommunications system, each reference GPS receiver capable of providing assistance GPS data, which includes identified visible GPS satellites and orbital parameters, clock corrections and differential corrections associated with the visible GPS satellites;

determining whether the GPS signal strength at the GPS-equipped mobile terminal is adequate to permit initialization of the reference GPS receiver associated with the GPS-equipped mobile terminal within a desired response time;

if not, sending a request from the GPS-equipped mobile terminal to the BTS for approximate navigational data;

utilizing the BTS location as an initial position estimate for the GPS-equipped mobile terminal and as a criterion for selecting one of the number of reference GPS receivers nearest the GPS-equipped mobile terminal;

retrieving relevant assistance data from the selected reference GPS receiver;

the BTS sending navigational data, comprising the relevant assistance GPS data, to the GPS-equipped mobile terminal for estimating the current position of the GPS-equipped mobile terminal; and

utilizing the navigational data to acquire the GPS signals from optimally situated GPS satellites.

54. (New) A method of expediting startup procedures of a Global Positioning System (GPS) receiver associated with a mobile terminal, the mobile terminal connected to a wireless telecommunications system having a Base Transceiver Station (BTS), the BTS having operational control of the GPS-equipped mobile terminal, the method comprising the steps of:

- positioning a number of reference GPS receivers throughout the wireless telecommunications system, each reference GPS receiver capable of providing relevant assistance GPS data, which includes identified visible GPS satellites and orbital parameters, clock corrections and differential corrections associated with the visible GPS satellites;

- sending a request from the GPS-equipped mobile terminal to the BTS for approximate navigational data;

- utilizing the BTS location as an initial position estimate for the GPS-equipped mobile terminal as a criterion for selecting one of the number of reference GPS receivers nearest the GPS-equipped mobile terminal;

- retrieving relevant assistance data from the selected reference GPS receiver;

- the BTS sending navigational data, comprising the relevant assistance GPS data, to the GPS-equipped mobile terminal for estimating the current position of the GPS-equipped mobile terminal;

- periodically transmitting a Timing Advance parameter from the Base Transceiver Station to the GPS-equipped mobile terminal to dynamically compensate for varying distances between the GPS-equipped mobile terminal and the Base Transceiver Station;

- refining the approximate location of the GPS-equipped mobile terminal using the Timing Advance parameter; and

- utilizing the navigational data to acquire the GPS signals from optimally situated GPS satellites.

55. (New) The method of claim 54, wherein the step of estimating the current position of the GPS-equipped mobile terminal further comprises the steps of:

recovering respective navigational data signals from demodulated GPS signals from the GPS satellites; and

determining, from the respective navigational data signals, the location of the reference GPS receiver.

56. (New) An arrangement for expediting startup procedures of a Global Positioning System (GPS) receiver associated with a mobile terminal, the mobile terminal connected to a wireless telecommunications system having a Base Transceiver Station (BTS), the BTS having operational control of the GPS-equipped mobile terminal, the arrangement comprising:

a number of reference GPS receivers positioned throughout the wireless telecommunications system, each reference GPS receiver capable of providing assistance GPS data, which includes identified visible GPS satellites and associated orbital parameters, clock corrections and differential corrections;

means for initiating a request from the GPS-equipped mobile terminal to the BTS for approximate navigational data;

means utilizing the BTS location as an initial position estimate for the GPS-equipped mobile terminal as a criterion for selecting one of the number of reference GPS receivers nearest the GPS-equipped mobile terminal;

retrieval means for retrieving the relevant assistance data from the selected reference GPS receiver;

means associated with the BTS for sending navigational data, comprising the relevant assistance GPS data, to the GPS-equipped mobile terminal for estimating the current position of the GPS-equipped mobile terminal; and

means for utilizing the navigational data to acquire the GPS signals from optimally situated GPS satellites.

57. (New) The arrangement according to claim 56, wherein the GPS-equipped mobile terminal further includes

means for determining a cell ID corresponding to the cell in which the GPS-equipped mobile terminal is currently located.

58. (New) The arrangement according to claim 56, wherein the means including selecting one of a number of reference GPS receivers, further comprises means for determining the coordinates of the selected reference GPS receiver in a look-up table.

59. (New) The arrangement according to claim 56, wherein the means for sending a request to the BTS for approximate navigational data is responsive to activation of the mobile terminal.

60. (New) The arrangement according to Claim 56, wherein the means for sending a request to the BTS for approximate navigational data is responsive to placing a call from the GPS-equipped mobile terminal to one of a set of designated numbers.

61. (New) The arrangement according to Claim 60, wherein the one designated number is associated with an emergency service.

62. (New) The arrangement according to Claim 56, further comprising means for storing an estimated location of the one of the reference GPS receivers in said wireless telecommunications system.

63. (New) The arrangement according to Claim 56, wherein the GPS-equipped mobile terminal further comprises means for:

utilizing a timing reference between a GPS clock signal and a frame number, wherein the timing reference comprises

a correlation between the frame number and the GPS clock signal at the one of the reference GPS receivers and

broadcasting the correlation to the GPS-equipped mobile terminal.